



# **[VOLTAGE-CONTROLLED CAPACITOR CIRCUIT AND RELATED CIRCUITRY WITH DIODE AND MOS VARACTORS]**

A voltage-controlled capacitor circuit and related circuitry. The voltage-controlled capacitor circuit includes a metal-oxide semiconductor (MOS) varactor, a diode varactor, and/or a capacitor with fixed capacitance. The MOS varactor, the diode varactor and the capacitor are electrically connected in parallel or in series to form a capacitor with a preferred characteristic of voltage-controlled capacitance.